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EXAMINER

DESHPANDE, KALYAN K

ART UNIT PAPER NUMBER

3623

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|---|--|
| Office Action Summary | Application No. 09/998,064 | Applicant(s) INAGI, YOSHITAKA | |
| | Examiner Kalyan K. Deshpande | Art Unit 3623 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/30/01&12/15/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. The following is a non-final office action in response to the communications received on November 30, 2001. Claims 1-17 are now pending in this application.

Information Disclosure Statement

2. The examiner has reviewed the patents and articles supplied in the Information Disclosure Statements (IDS) provided on November 30, 2001 and December 15, 2005.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Sinex (U.S. Patent No. 6442459).

As per claim 1, Sinex teaches:

A maintenance server which maintains a POS terminal comprising:

a system manager extracting necessary maintenance routines, creating a workflow of maintenance routines, and submitting suggested workflow to production manager to review and modify (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the

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MRB program manager to determine what maintenance is necessary.

The DAMP manager creates a workflow of maintenance routines necessary and submits the workflow to the production manager. The production manager can modify the workflow and assign specific task the specific maintenance employees.);

a storage section configured by a manager to display the schedule of tasks assigned to maintenance employees (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where tasks are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.);

a determining section configured to determine whether or not replacement of respective parts are necessary based on actual operation data of the respective parts (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary. Users can select different logic formulas which control when parts replacement is done.);

a deciding section configured to decide a part-replacement operation date by collating the schedule of the store manager stored in said first storage section and the schedule of the maintenance operator stored in said second storage section with each other if said determining section determines that replacement of at least one part is necessary (see column

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8 line 50 – column 10 line 62; where part-replacement routines are scheduled and given estimated completion dates.); and

a notifying section configured to give notification about the part-replacement operation date decided by said deciding section (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow that is then submitted to a production manager. The production manager is notified of all maintenance routines, including part replacement routines that need to be performed.).

Sinex fails to teach:

a first storage section configured to store a schedule of a manager of a store in which the POS terminal is operated;

a second storage section configured to store a schedule of a maintenance operator who is in charge of maintenance of the POS terminal;

Sinex does not explicitly teach a method of POS terminal maintenance.

However, Sinex discloses a maintenance management system that can be applied to a variety of industries, regardless of the intended field of use of the method. Sinex teaches an aircraft maintenance, though the system has utility in other applications (see column 18 lines 57-61). The system being adapted to POS terminal maintenance is irrelevant since the intended use does not change the overall functionality of the system. The intended use must result in a

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manipulative difference as compared to the prior art. The intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Therefore, it would have been obvious, at the time of the invention, to one of ordinary skill in the art to use the Sinex system for the maintenance of a POS terminal because the Sinex system is designed to be used in a maintenance management environment regardless of the intended use.

Sinex teaches assigning maintenance routines to maintenance employees in order to create a maintenance workflow and schedule. Sinex teaches the workflow to be monitored by a production manager. Sinex does not explicitly teach the storing of schedules of both manager and a maintenance operator. It is old and well-known in the art to assign task to managers and employees based on their availability listed in their schedules and storing their schedules to use as a reference to determine the availability of the managers and employees. The advantage of storing managers and employees' schedules is that the system will have access to the most up to date availability of managers and employees. Another advantage of storing the schedules is that the storage provides a consolidated location to store their schedules such that their schedules will be easily found and accessed. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to store both a manager and a maintenance employee's schedule in order for the system to keep track of the most up to date availability information and provide a location that managers and employees schedules can be easily found and accessed.

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As per claim 2, Sinex teaches:

The server according to claim 1, further comprising a schedule updating section configured to update the schedule of the maintenance operator stored in said second storage section when said notifying section gives notification about the part-replacement operation date (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow maintenance routines that is then submitted to a production manager. Maintenance routines are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.).

As per claim 3, Sinex teaches:

The server according to claim 1, wherein said deciding section derives part-replacement operation requirements, automatically or semi-automatically assigns the tasks to maintenance operators, determines the number of hours each maintenance routine will require, determines whether one routine needs to be completed before another routine, and monitors maintenance in real time to ensure tasks are completed on time (see column 4 line 5 – column 17 line 18; where the system compares component use data and component longevity data to determine maintenance requirements. The maintenance

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requirements are organized in a workflow maintenance routines. The system determines whether one routine needs to be completed before another routine can begin. The specific tasks needed to be maintained are assigned automatically or semi-automatically to maintenance employees. The tasks are assigned total hours that are to be spent on the tasks and allows for real-time monitoring of the workflow to ensure the maintenance is done on time.).

Sinex fails to teach:

wherein said deciding section derives part-replacement operation possible days based on the schedule of the manager in the store in which the POS terminal requiring replacement of a part is operated, derives part-replacement operation possible days based on the schedule of the maintenance operator who is in charge of maintenance of the POS terminal, and decides the earliest one of the replacement operation possible days which is common to both the manager and maintenance operator as a part-replacement operation date.

It is old and well-known in the art to determine the earliest date of service based on the schedules of the manager and maintenance employees. The advantage of determining the earliest service date based on employee schedules is that employees schedules give the most accurate data regarding their availability, thus increasing the accuracy of the determination. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to determine an earliest date of service based on managers and employees schedules in order to increase the accuracy of the determination.

As per claim 4, Sinex teaches:

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The server according to claim 3, wherein said deciding section derives part-replacement operation possible days for respective maintenance operators if a plurality of maintenance operators who are in charge of maintenance are present (see column 7 lines 9-67; where the system determines when the maintenance, including part replacement, needs to be performed. The assigned tasks to maintenance employees are monitored on the system. When an employee is present, their workflow maintenance routine is displayed as green, when a maintenance employee is not present, their routine is displayed as red.).

Sinex fails to teach:

decides the earliest one of the replacement operation possible days which is common to both the store manager and at least one of the maintenance operators as a part-replacement operation date.

Claim 4 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

As per claim 5, Sinex teaches:

A maintenance server which maintains a POS terminal comprising:

a system manager extracting necessary maintenance routines, creating a workflow of maintenance routines, and submitting suggested workflow to production manager to review and modify (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary.

The DAMP manager creates a workflow of maintenance routines

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necessary and submits the workflow to the production manager. The production manager can modify the workflow and assign specific task the specific maintenance employees.);

a storage section configured by a manager to display the schedule of tasks assigned to maintenance employees (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where tasks are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.);

a determining section configured to determine whether or not replacement of respective parts of the POS terminal is necessary based on actual operation data of the respective parts in the POS terminal (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary. Users can select different logic formulas which control when parts replacement is done.);

a calculating section configured to calculate maintenance operation time based on the time required for replacement of the part and time required for the maintenance operator to move to the store in which the POS terminal is operated when said determining section determines that replacement of the part of the POS terminal is necessary (see column 9 lines 17-43; where forecasted times are projected to complete each task.

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These forecasts would include the time required for an employee to be positioned to begin performance. The forecasted times are compared to actual times to determine accuracy of the forecasted times.);

a deciding section configured to derive vacant time zones which are longer than the maintenance operation time based on the schedule of the store manager stored in said first storage section and derive vacant time zones which are longer than the maintenance operation time based on the schedule of the maintenance operator stored in said second storage section when said calculating section calculates the maintenance operation time and decides the earliest one of the vacant time zones which is common to both the store manager and maintenance operator as a part-replacement operation time zone (see column 8 line 50 – column 10 line 62; where part-replacement routines are scheduled and given estimated completion dates.); and

a notifying section configured to give notification about the part-replacement operation time zone decided by said deciding section (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow that is then submitted to a production manager. The production manger is notified of all maintenance routines, including part replacement routines that need to be performed.).

Sinex fails to teach:

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a first storage section configured to store a schedule of a manager of a store in which the POS terminal is operated;

a second storage section configured to store a schedule of a maintenance operator who is in charge of maintenance of the POS terminal;

Claim 5 recites limitations already addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 6, Sinex teaches:

The server according to claim 5, further comprising a schedule updating section configured to update the schedule of the maintenance operator stored in said second storage section when said notifying section gives notification about the part-replacement operation time zone (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow maintenance routines that is then submitted to a production manager. Maintenance routines are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.).

As per claim 7, Sinex teaches:

The server according to claim 5, wherein said deciding section derives part-replacement operation possible time zones for respective maintenance

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operators if a plurality of maintenance operators who are in charge of maintenance are present (see column 7 lines 9-67; where the system determines when the maintenance, including part replacement, needs to be performed. The assigned tasks to maintenance employees are monitored on the system. When an employee is present, their workflow maintenance routine is displayed as green, when a maintenance employee is not present, their routine is displayed as red.).

Sinex fails to teach:

decides the earliest one of the replacement operation possible days which is common to both the store manager and at least one of the maintenance operators as a part-replacement operation date.

Claim 7 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

As per claim 8, Sinex teaches:

A maintenance server which maintains a POS terminal comprising:

an system manager extracting necessary maintenance routines, creating a workflow of maintenance routines, and submitting suggested workflow to production manager to review and modify (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary.

The DAMP manager creates a workflow of maintenance routines necessary and submits the workflow to the production manager. The

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production manager can modify the workflow and assign specific task the specific maintenance employees.);

a storage section configured by a manager to display the schedule of tasks assigned to maintenance employees (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where tasks are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.);

means for determining whether or not replacement of respective parts of the POS terminal is necessary based on actual operation data of the respective parts in the POS terminal (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary. Users can select different logic formulas which control when parts replacement is done.);

means for deciding a part-replacement operation date by collating the schedule of the store manager stored in said first storage means and the schedule of the maintenance operator stored in said second storage means with each other if said determining means determines that replacement of at least one of the parts of the POS terminal is necessary (see column 8 line 50 – column 10 line 62; where part-replacement routines are scheduled and given estimated completion dates.); and

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notifying means for giving notification about the part-replacement operation date decided by said deciding means (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow that is then submitted to a production manager. The production manger is notified of all maintenance routines, including part replacement routines that need to be performed.).

Sinex fails to teach:

first storage means for storing a schedule of a manager of a store in which the POS terminal is operated;

second storage means for storing a schedule of a maintenance operator who is in charge of maintenance of the POS terminal;

Claim 8 recites limitations already addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 9, Sinex teaches:

The server according to claim 8, further comprising means for updating the schedule of the maintenance operator stored in said second storage means when said notifying means gives notification about the part-replacement operation date (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list

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is converted to a workflow maintenance routines that is then submitted to a production manager. Maintenance routines are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.).

As per claim 10, Sinex teaches:

The server according to claim 8, wherein said deciding means derives part-replacement operation requirements, automatically or semi-automatically assigns the tasks to maintenance operators, determines the number of hours each maintenance routine will require, determines whether one routine needs to be completed before another routine, and monitors maintenance in real time to ensure tasks are completed on time (see column 4 line 5 – column 17 line 18; where the system compares component use data and component longevity data to determine maintenance requirements. The maintenance requirements are organized in a workflow maintenance routines. The system determines whether one routine needs to be completed before another routine can begin. The specific tasks needed to be maintained are assigned automatically or semi-automatically to maintenance employees. The tasks are assigned total hours that are to be spent on the tasks and allows for real-time monitoring of the workflow to ensure the maintenance is done on time.).

Sinex fails to teach:

wherein said deciding section derives part-replacement operation possible days based on the schedule of the manager in the store in which the POS

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terminal requiring replacement of a part is operated, derives part-replacement operation possible days based on the schedule of the maintenance operator who is in charge of maintenance of the POS terminal, and decides the earliest one of the replacement operation possible days which is common to both the manager and maintenance operator as a part-replacement operation date.

Claim 10 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

As per claim 11, Sinex teaches:

The server according to claim 10, wherein said deciding section derives part-replacement operation possible days for respective maintenance operators if a plurality of maintenance operators who are in charge of maintenance are present (see column 7 lines 9-67; where the system determines when the maintenance, including part replacement, needs to be performed. The assigned tasks to maintenance employees are monitored on the system. When an employee is present, their workflow maintenance routine is displayed as green, when a maintenance employee is not present, their routine is displayed as red.).

Sinex fails to teach:

decides the earliest one of the replacement operation possible days which is common to both the store manager and at least one of the maintenance operators as a part-replacement operation date.

Claim 11 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

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As per claim 12, Sinex teaches:

A remote maintenance system comprising:

a server provided in a maintenance center which performs maintenance (see column 17 lines 20-31; where the system runs a client/server network.); and

computers connected to said server via a network (see column 17 lines 20-31; where the system runs a client/server network.);

each of said store computers comprising:

a data accumulating section configured to accumulate actual operation data of each of parts constituting the POS terminal (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary.); and

an system manager extracting necessary maintenance routines, creating a workflow of maintenance routines, and submitting suggested workflow to production manager to review and modify (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. The DAMP manager creates a workflow of maintenance routines necessary and submits the workflow to the production manager. The production manager can modify the workflow and assign specific task the specific maintenance employees.);

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a storage section configured by a manager to display the schedule of tasks assigned to maintenance employees (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where tasks are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.);

said server comprising:

a data receiving section configured to receive actual operation data of the respective parts of in said data accumulating section of said computer (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary.);

a determining section configured to determine whether replacement of at least one of the parts of each POS terminal is necessary or not based on the actual operation data of the respective parts of the POS terminal received by said data receiving section (see column 4 line 5 – column 8 line 3; where a tracking manager monitors component usage to determine whether maintenance is necessary. Users can select different logic formulas which control when parts replacement is done.);

a deciding section configured to collate the schedule of the store manager received by said data receiving section and the schedule

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of the maintenance operator stored in said maintenance operator schedule storage section with each other if said determining section determines that replacement of the part of the POS terminal is necessary and decide a part-replacement operation date (see column 8 line 50 – column 10 line 62; where part-replacement routines are scheduled and given estimated completion dates.); and

a notifying section configured to give information about the part-replacement operation date decided by said deciding section to a corresponding one of the stores via the network (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow that is then submitted to a production manager. The production manager is notified of all maintenance routines, including part replacement routines that need to be performed.).

Sinex fails to teach:

a store manager schedule storage section configured to store a schedule of a manager of the store; and

a maintenance operator schedule storage section configured to store a schedule of a maintenance operator who is in charge of maintenance of the POS terminal;

Claim 12 recites limitations already addressed by the rejection of claim 1; therefore the same rejection applies to this claim.

As per claim 13, Sinex teaches:

The remote maintenance system according to claim 12, wherein said server further comprises a schedule updating section which is configured to update the schedule of the maintenance operator stored in said maintenance operator schedule storage section when said notifying section gives notification about the part-replacement operation date (see column 9 lines 3-61 and column 16 line 46 – column 17 line 18; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow maintenance routines that is then submitted to a production manager. Maintenance routines are automatically or semi-automatically assigned to maintenance employees. Maintenance employees log on to the system to learn of their schedule. A notice is sent to managers if employees are absent and the maintenance routines need to be reassigned.).

As per claim 14, Sinex teaches:

The remote maintenance system according to claim 12, wherein said deciding section derives part-replacement operation requirements, automatically or semi-automatically assigns the tasks to maintenance operators, determines the number of hours each maintenance routine will require, determines whether one routine needs to be completed before

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another routine, and monitors maintenance in real time to ensure tasks are completed on time (see column 4 line 5 – column 17 line 18; where the system compares component use data and component longevity data to determine maintenance requirements. The maintenance requirements are organized in a workflow maintenance routines. The system determines whether one routine needs to be completed before another routine can begin. The specific tasks needed to be maintained are assigned automatically or semi-automatically to maintenance employees. The tasks are assigned total hours that are to be spent on the tasks and allows for real-time monitoring of the workflow to ensure the maintenance is done on time.).

Sinex fails to teach:

wherein said deciding section derives part-replacement operation possible days based on the schedule of the manager in the store in which the POS terminal requiring replacement of a part is operated, derives part-replacement operation possible days based on the schedule of the maintenance operator who is in charge of maintenance of the POS terminal, and decides the earliest one of the replacement operation possible days which is common to both the manager and maintenance operator as a part-replacement operation date.

Claim 14 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

As per claim 15, Sinex teaches:

The remote maintenance system according to claim 14, wherein said deciding section derives part-replacement operation possible days for

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respective maintenance operators if a plurality of maintenance operators who are in charge of maintenance are present (see column 7 lines 9-67; where the system determines when the maintenance, including part replacement, needs to be performed. The assigned tasks to maintenance employees are monitored on the system. When an employee is present, their workflow maintenance routine is displayed as green, when a maintenance employee is not present, their routine is displayed as red.).

Sinex fails to teach:

decides the earliest one of the replacement operation possible days which is common to both the store manager and at least one of the maintenance operators as a part-replacement operation date.

Claim 15 recites limitations already addressed by the rejection of claim 3; therefore the same rejection applies to this claim.

As per claim 16, Sinex teaches:

The remote maintenance system according to claim 12, wherein said notifying section gives notification about the part-replacement operation date (see column 8 line 50 – column 9 line 16; where the DAMP manager extracts data from the MRB program manager to determine what maintenance is necessary. Part replacement routines are part of this maintenance list. This maintenance list is converted to a workflow that is then submitted to a production manager. The production manger is notified of all maintenance routines, including part replacement routines that need to be performed.).

Sinex fails to teach:

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use of an electronic mail utilizing the Internet

It is old and well-known in the art to notify organization entities by the use of electronic mail that utilizes the Internet. The advantages of using electronic mail that utilizes the Internet are the speed of delivery of the notification, the operation expenses saved by not using paper, and the consolidation of filing notifications by electronically storing the notifications. It would have been obvious, at the time of the invention, to one of ordinary skill in the art to notify organization entities by the use of electronic mail that utilizes the Internet in order to expedite the speed of notification delivery, reduce paper costs, and consolidate paper files to electronic storage mediums.

As per claim 17, Sinex teaches:

The remote maintenance system according to claim 16, wherein said notifying section gives notification about at least one of the name of the part to be replaced and the name of the maintenance operator who will replace the part together with the part-replacement operation date (see column 4 line 5 – column 17 line 18; where the system gathers use information on all used components. By comparing the use data and the component specification data (component longevity), the system determines each part that needs maintenance or replacement. The system then either automatically or semi-automatically assigns the maintenance task to a maintenance employee. The system further forecasts maintenance times to determine completion dates.).

Conclusion

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5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are pertinent to the current invention, though not relied upon:

Cornett et al. (U.S. Patent No. 5216612) teaches an intelligent computer integrated maintenance system and method includes an electronically stored parts manual which contains a hierarchical listing of all parts in production machines, and a maintenance operations computer controller which includes a maintenance schedule management subsystem, an engineering change control subsystem, a parts manual management subsystem and a spares inventory management subsystem.

Matsumoto (U.S. Patent No. 5467270) teaches a system and method for POS based on fuzzy theory utilizing data extraction.

Iguchi (U.S. Patent No. 5745705) teaches a POS system and the maintenance thereof.

Vines et al. (U.S. Patent No. 6006171) teaches a computerized maintenance management system for the process control environment which integrates a CMMS system with a process control system.

Piety et al. (U.S. Patent No. 6192325) teaches a computerized method and apparatus which enables a user, even one who has little or no predictive maintenance skills, to establish a predictive maintenance database that defines information needed to monitor equipment in accordance with a predictive maintenance plan.

Watanabe (U.S. Patent No. 6363354) teaches the use of historical POS data for maintenance.

Watson (U.S. Patent No. 6581045) teaches an asset management system is disclosed, and is adapted for use to rate the condition of a physical asset component, such as a roof, estimate the service life of the asset, and provide a basis for decisions regarding the selection of repair alternatives and/or replacement options associated with the asset.

Venkataraman (U.S. Patent No. 6785845) teaches a system for testing an application running on a point-of-sale (POS) terminal comprises a host running on a personal computer connected to the POS terminal, and a target running on the POS terminal.

Honma et al. (U.S Patent No. 5343387) teaches a cyclical maintenance schedule.

Usher et al. (Usher, John S.; Kamal, Ahmed H.; Syed, Wasim Hashmi; "Cost Optimal Preventive Maintenance and Replacement Scheduling", *IEE Transactions*, December 1998, pp. 1121-1128) teaches a method for predicting a cost-optimal preventive maintenance policy.

Gopalakrishnan et al. (Gopalakrishnan, Mohan; Ahire, Sanjay L.; Miller, David M.; "Maximizing the Effectiveness of a Preventive Maintenance System: An Adaptive Modeling Approach", *Management Science*, June 1997, pp. 827-840) teaches an adaptive preventive maintenance management schedule which maximizes savings subject to workforce constraints.

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Wheaton (Wheaton, Eric; "From Here to Reliability", *IEE Solutions*, February 1997, pp. 32-41) teaches a predictive maintenance method.

Eade (Eade, Robert; "Software Makes CMMs Versatile, Flexible"; *Quality*, May 1995, pp. 20-26) teaches the development of software to manage maintenance systems.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571) 272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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